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ABSTRACT

One possible explanation for Australia's technical and further education's (TAFE's) defensiveness in its relationship with higher education is its lack of a secure definition since its foundation by the Kangan committee. Perhaps vocational education could found its identity on another characteristic. Neither an analysis of various definitions of vocational education nor an examination of the arrangements in some states in the United States and Canadian provinces provides an entirely satisfactory role for Australia's vocational education and training institutes. Vocational education has been defined as a training of the hand rather than an education of the mind; in contrast to general and liberal education; as practical, applied education; and by educational and occupational levels. Most comparable North American institutions offer the first two years of the four-year baccalaureate awarded by universities. There has been some interest in establishing institutions with a similar role in Australia, but the benefits from such a development do not seem great enough to compensate for the extensive restructuring of the existing sectors that would be required. The most similar bodies to Australia's TAFE institutes are Ontario's colleges of applied arts and technology. They provide a useful comparison for Australian vocational education, but they are unusual in North America and a limited example for TAFE's identity. (Contains 46 references.) (YLB)

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Translating practice into research: how we have come to define and structure 'vocational' education

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In this paper, I start with a problem arising from our practice in Australian vocational education and training, which I suggest is the source of some difficulties in inter-sectoral relations. I examine that practice in some detail, and then seek lessons from vocational education and training in two other federations – the US and Canada.

The problem

In a paper tellingly titled 'university-TAFE collaboration: the kiss of death?' a leading technical and further education practitioner and expert Professor Kaye Schofield said (1998, p 5):

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> In a country where there are probably too many universities, and where economies of scale and scope will become of increased importance, universities are looking for survival strategies. Absorption of TAFE institutions into universities might not do much for economies of scope but certainly will do a lot for economies of scale. … No matter how much such thinking is dressed up, the bottom line is competition. Universities are the timber wolves and … they hunt in packs. TAFE institutions are the deer.

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Schofield said this at a conference hosted by the Northern Territory University, one of Australia's dual sector universities with substantial higher education and vocational education and training programs. Two years later, at another dual-sector institution (Victoria University of Technology), Schofield reiterated the point, although not in the same terms (2000).

Schofield was speaking when several Victorian TAFE institutions were indeed being absorbed into universities (Ramler 1997), in two cases substantially improving the senior institutions' survival prospects. The TAFE sectors are clearly subordinate in all five Australian dual sector institutions, perhaps even subordinated by their higher education colleagues. Yet the vehemence of Schofield's view and that of many of her colleagues invites explanation, particularly since it seems to ignore the experience of the TAFE divisions of RMIT and Swinburne University, neither of which seems weaker for having been part of a dual sector institution for a century more or less in each case.

Compare the relationship between the TAFE and higher education sectors of tertiary education with the relationship between the health vocations nursing and medicine. Some leading nurse practitioners and academics argue against including nursing in the same academic organisational unit as medicine because it is likely to stifle nursing's development as a discipline and independent vocation, since it simply transfers into the academy nursing's subjugation to medicine in the workplace.

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(Incidentally, at the University of Adelaide, a short stroll from this conference, clinical nursing seems to be flourishing as a department within the school of medicine.) But the nursing critics' opposition to being located in the same organisational unit as medicine never seemed as strident as TAFE's opposition to being located within dual-sector institutions.

One possible explanation for TAFE's defensiveness in its relationship with higher education is its lack of a secure identity (Gooze 1993, p 6). However much nursing may be subordinated by medicine in wards and on campus, noone doubts that nursing will endure as a vocation and as a discipline. But arguably TAFE practitioners and scholars are much less confident of TAFE's survival because of its lack of a secure identity.

In a paper descriptively titled 'Chameleon or phoenix: the metamorphosis of TAFE', Damon Anderson charted the changes in Australian TAFE's identity 'which to date have threatened TAFE's survival as a distinct sector of education and training' (1998, p 1). This followed Murray-Smith's authoritative observation that 'the "received" definitions of technical education change radically from one era to another' (1965, p 170).

TAFE has lacked a secure identity since its foundation by the Kangan committee.

Kangan's contribution

The Kangan committee established a mission for TAFE in Australia from the mid-1970s to the mid-1990s, which is still influential in shaping the scope and values of technical and further education. But Kangan did not define an identity for the sector, as it itself acknowledged. The opening sentence of the committee's report describes its role and that of TAFE residually - that left over from the other sectors (Kangan 1974, p xxvi) -

> The concept central to this report is the provision of unrestricted access to post school education through government maintained or administered institutions not already assisted through the Australian Universities Commission or the Australian Commission on Advanced Education.

That sentence is from Kangan's summary. Kangan sets out its full argument on this point, such as it is, in the first four paragraphs of its substantive report (1974, p 2) -

> 1.1 The pattern of post secondary education in government administered or maintained institutions consists of universities, colleges of advanced education, technical colleges, adult education centres and like institutions.
>
> 1.2 Technical and further education is available from all of these institutions. Thus, for example, the intensive vocational training of technologists - such as engineers, dentists, physicists and medicos - by universities, contradicts the general impression of universities as being ivory towers of liberal study and research; it destroys the myth, too long perpetuated, that a university education necessarily excludes vocational training as one of its aims.

> 1.3 It is much easier to pick out the broad category of education to which vocational education belongs, than it is to draw precise dividing lines between it and other categories.
>
> 1.4 This committee is concerned, however, only with the relevant government institutions not covered by the Australian Universities Commission and the Australian Commission on Advanced Education.

The committee acknowledged interest in a precise definition of TAFE (1974, p 5) but 'it believes that it is beyond human capacity to devise a precise definition of technical or further education that would stand the test of time' (1974, p 6).

More recently, of course, the State and Commonwealth ministers responsible for TAFE have vigorously sought to narrow TAFE to vocational education, since further education is said to divert TAFE from its primary purposes of supporting economic development. The ministers have also sought to re-orient TAFE from Kangan's strong commitment to the interests of students as citizens as well as employees, to serving employers as its primary clients - thus incidentally returning TAFE to its orientation before Kangan, which Kangan so cogently criticised.

So when higher education institutions start using the rhetoric of vocationalism, when they adopt some of the techniques of workplace-based education from TAFE and when they express a commitment to serving employers' needs, they seem to be taking over all of TAFE's indicia. The last remaining distinctive characteristic of TAFE seems to the level of its awards specified by the Australian qualifications framework. But even that is being taken over by higher education institutions which are absorbing TAFE institutes or registering as TAFE-level training organisations in their own right.

Perhaps vocational education could found its identity on some other characteristic.

Attempts to define 'vocational' education

Defining 'technical' or 'vocational' education has been a longstanding problem. 120 years ago, T H Huxley lamented that 'it passes the wit of man, so far as I know, to give a legal definition of technical education' (1877). Arguably, Huxley would observe that we have made little progress in the ensuing century.

As a training of the hand rather than an education of the mind

One of the earliest descriptions of 'technical instruction' is as the training of the hand, which is contrasted with the education of the mind (Magnus 1881, p 26). While no one would propose such a crude Cartesian dualism now, many descriptions of vocational education tacitly propound a more subtle mind/body distinction.

In contrast to general education

Another early understanding of vocational education was that it was specialist, and in particular technical, in contrast to general education (Wilkinson 1970, p 133 quoted in Hyland 1989, p 27). But this is hardly satisfactory since much of higher education is very specialised indeed.

In contrast to liberal education

Williams (1970) argues that the 'inner logic' of university and advanced education provides a 'functional differentiation' between them; between university education's intrinsic value and vocational education's instrumental value (quoted in Hermann et al 1976, p 187). Ashby proposes a similar distinction between *Bildung* - liberal education - and *Ausbildung* - vocational training. But Ashby observes a major difficulty with such a distinction, at least put simply (Ashby 1974, p 135) -

> Notice that this distinction cuts across some familiar boundaries. It puts into the same category the education provided by the faculty of medicine at Cambridge and by the department of catering at Colchester Technical College; and it puts into the same category Oxford Greats and Workers' Education Association courses on archaeology.

Notwithstanding the ahistorical claims that Australian universities' vocationalism is a modern betrayal of their supposed non-utilitarian virtues (Symes 1999), Australian universities have been understood since the 1860s to be distinctly vocational (Hyde 1983, p 108) if not 'exceptionally utilitarian or vocational' (Partridge 1973, p 129). So simple vocationalism has not been sufficient to found technical education's distinctiveness (Kangan 1974, p 2).

As practical, applied education

A distinctiveness proffered by Williams was that technical education was practical, in contrast to university education which was by implication (more) theoretical (1963, p 112) or academic. At other times Williams rests the distinctiveness of technical education on its applied nature in contrast to university education, which was by implication more 'pure' (1965, p 75). But again, this is not an accurate contrast with contemporary higher education.

By educational level

An obvious definition of vocational education is by educational level and this has been attempted in the US as elsewhere (Medsker and Tillery 1971, p 60). Quebec's general and vocational colleges (*collège d'enseignement général et professionnel*) sit distinctively between secondary and university education, since it is not possible to proceed from school to university without first completing the CEGEP's diploma of collegial studies (*diplôme d'études collégiales*) (Quebec 2001). However, this neatness is unusual.

More commonly there is equivocation, first, over whether vocational education is truly tertiary education (Jakupec and Roantree 1993, p 151). Many vocational courses assume an educational level of year 10, which suggests that at least many vocational courses are secondary in level (Murray-Smith 1965, p 186). This leads some to argue that vocational education should be defined by students' achievement upon their exit rather on their entry to the sector (Williams 1965, p 71), but this is hardly satisfactory.

Vocational education's reach has also been contested at the upper level. Following adoption of the Kangan report, there was a contest between TAFE and the advanced education sector over associate diploma-level qualifications (ACOTAFE 1975, p 109), which advanced education won (Gooze 1993, p 7; TAFE Commission 1976, p 100). Now the Australian qualifications framework has an overlap between TAFE and higher education in responsibility for diplomas and advanced diplomas (AQF 2001).

By occupational level

Vocational education is also commonly defined by derivation from the occupational level of its graduates (Moorhouse 1960, p 176; Haslegrave 1969, p 3; Hermann et al 1976, p 6; Murray-Smith 1965, p 189). This has in turn been related to class (Anderson 1998, pp 6-7; Hyde 1982, p 121). Williams provided one of the most finely graded classifications (1961, p 103) -

(i) trade
(ii) post trade
(iii) technician (production-maintenance)
(iv) technician (research design)
(v) professional
(vi) post professional

But the category of 'technician' was considered problematic, and Moorhouse (1960, p 178) and Williams (1961, p 101; 1963, p 92) clarify its categorisation carefully. While both authors believed that these occupational levels described the province of technical education, Moorhouse deprecated as 'a dangerous over-simplification' the ascription of institutional roles to occupational levels (1960, p 183).

Not elsewhere included

Australia was not alone in defining vocational education as 'not elsewhere included'. A commentator in the *Times Higher Education Supplement* said that 'the further education sector may be described as the "ragbag" into which are deposited courses not provided elsewhere' (THES 1973, p 1), and Parkes describes Britain's further education sector as filling the gaps not filled by alternative sectors (1991, p 42).

Perhaps we may get some guidance from overseas practice, and I examine aspects of vocational education in two other federations - the US and Canada.

Vocational education in the US

It would be misleading to describe higher education in the US as being a 'system', since the federal government has a very limited role and there is considerable variation between states and diversity within them. However, a fair generalisation is that US citizens start their post-secondary education in one of two broad types of institutions. Those who complete their high school diploma with a grade point average in the top 30% or so (see, for example, CU-Boulder 2001), or those who gain a comparable score in one of the national scholastic aptitude tests may gain entry into an institution that we would recognise as a university, although it might be called a 'four-year college' or 'baccalaureate-granting college'.

There is great variety in the orientation, standing and size of these institutions, ranging from the famous comprehensive research and doctorate granting institutions to institutions that are similar to Australia's former colleges of advanced education in offering baccalaureates and coursework Masters degrees, but not research degrees (see, for example, USC 2001). But most seem to have been founded on the paradigm of four years' full-time residential study for a first undergraduate degree immediately following high school.

Students who don't have a strong scholastic record or who want to study locally in a place that does not have a university within community distance can do the first two years of their baccalaureate course at a community college. After completing their associate of arts or science (see for example Pueblo Community College 2001) with a grade point average of 2.0 to 2.5 out of 4, these students may transfer with full credit towards the four-year baccalaureate offered by a middle-ranking comprehensive university (see for example CU-Colorado Springs 2001), and a higher grade point average will gain them entry to a more selective comprehensive research university (see for example CSU 2001).

Grubb notes that the institutions in the United States that educate and train people for employment have grown in number and complexity over the past 30 years. The traditional locus of vocational education has been high schools, but secondary vocational enrolments have declined substantially. Increasingly, vocational education takes place in post-secondary institutions including community colleges, technical institutes, and area vocational schools (Hermann et al 1976, p 16). Various federal special purpose labour force and welfare programs have proliferated providers (Grubb 1996, p 30).

US community colleges typically have two functions, then: providing vocational education and proving transfer programs for those seeking entry to four-year colleges or universities. Thus Red Rocks Community College (2001) in Denver, Colorado offers four degree programs –

AA - Associate of Arts (transferable)
AS - Associate of Science (transferable)
AGS - Associate of General Studies (pre-professional transfer or occupational)
AAS - Associate of Applied Science (occupational).

It also offers some 50 certificate programs in areas such as aviation technology, bookkeeping, criminal justice, early childhood, electrical, information technology, nurse aide/home health aide, park ranger technology, plumbing and video production.

However, many community colleges offer no apprenticeships and few trade courses. Of Colorado's 13 community colleges, only four offer apprenticeships. Most of Colorado's community colleges offer what are often called 'occupational' courses, but in other States community colleges' vocational programs are largely restricted to what we would call para professional courses.

Grubb reported a widespread sense amongst employers of the job-related education and training system being chaotic and fragmented (1996, p 57). This is because occupations are largely unregulated – licensing requirements are quite rare outside of health occupations (Grubb 1996, p 57). Even in Colorado, which is one of the more regulated states, there is no licensing requirement and in many cases no apprenticeship for bricklayers, car mechanics, carpenters, fitters and turners, painters and decorators, or riggers (DORA 2001).

Since experience, informal job tests, and on-the-job probation count much more than educational qualifications in hiring permanent employees (Grubb 1996, p 60),

educational institutions have a much lesser role in providing access to semi skilled and skilled occupations. Formal college qualifications are held by only 45% of dental hygienists, 34% of drafting occupations, 30% of registered nurses, and 21% of electronic repairers (Grubb 1996, p 66).

Instead, large employers and employer groups develop their own company training programs for skilled workers, sometimes cooperatively with colleges, but often entirely in house (Fawcett 1965, p 255). Thus, General Motors, Ford, Toyota, Chrysler, Nissan and the recreation vehicle industry association run apprenticeship and post-apprenticeship programs (Cantor 1993, pp 98-99).

Vocational education in Canada

While the US federal government has a very limited role in higher education, it at least has an office of post-secondary education; the Canadian federal government has no department of education let alone a department of higher education, and no broad federal policy for higher education (Jones 1994, p 222). There is therefore considerable variation in tertiary education arrangements between provinces – at least as much as between the US states – but perhaps less variation within provinces.

One national characteristic, however, has been the traditional practice of importing rather than training skilled workers (Ashton et al 1991, p 236; Dennison and Gallagher 1986, p 11). This has limited the development of vocational education in most provinces (Ashton et al 1991, p 237).

Australian and British observers would find the most familiar arrangements for vocational education in Alberta. There the apprenticeship system is still strong, with the off-the job training provided by community colleges and the two technical institutes (Alberta Learning 2001). However, firms normally offer apprenticeships to staff who have completed a probationary period within the firm, so typically apprentices in Alberta are much older than their counterparts in Australia and Britain (Ashton et al 1991, p 238). Alberta's community colleges also have the college transfer function similar to US community colleges, but unlike any Australian institution.

The apprenticeship system is still vigorous but in fewer trades in Ontario. Off-the-job training for apprentices and sub-degree level vocational education is provided by Ontario's 25 colleges of applied arts and technology (Jackson 1971, p 40). CAATs are not comprehensive colleges – they do not prepare students for transfer to four-year colleges (Medsker 1972, p 80). They are therefore the closest North American analogues to Australia's TAFE colleges.

Admission to Quebec's universities is after completing a diploma of collegial studies (*Diplôme d'études collégiales*) at one of Quebec's 48 general and vocational colleges, known as CEGEPs (*collège d'enseignement général et professionnel*). Thus the CEGEPs have the most secure position of non-baccalaureate institutions we have examined, since they have a distinctive place between secondary and university education. But as their name suggests, CEGEPs have the dual transfer and vocational roles familiar in US community colleges.

British Columbia has essentially reproduced the Californian model (Harman 1978, p 116) which segments higher education between highly selective comprehensive research universities, moderately selective four-year universities and open access community colleges that offer both transfer and vocational programs.

There are yet other arrangements in Canada's vast but sparsely populated prairie provinces, and different arrangements yet again in the small Atlantic provinces. Such is the diversity of arrangements, that Dennison and Gallagher suggest that it may have been a strategic error to call the new post-secondary institutions 'colleges' because that term had been used to identify so many different kinds of institutions; indeed, the term had become so imprecise as to be almost meaningless (1986, p 142). Another observer argued that 'the non universities will fail us if they evolve only as carbon copies of the past or as institutions that zig and zag with the opportunism of the moment. A firm self concept is essential to their promising new role in society' (Clark 1971, quoted in Medsker 1972, p 79).

Conclusion

Neither an analysis of various definitions of vocational education nor an examination of the arrangements in some US states and Canadian provinces provides an entirely satisfactory role for Australia's vocational education and training institutes. Most of the comparable North American institutions offer the first two years of the four-year baccalaureate awarded by universities. There has been some interest in establishing institutions with a similar role in Australia (Harman 1978), but the benefits from such a development don't seem great enough to compensate for the extensive restructuring of the existing sectors that would be required.

The most similar bodies to Australia's TAFE institutes considered are Ontario's colleges of applied arts and technology. These provide a useful comparator for Australian vocational education, but they are unusual in North America and thus are a limited example for TAFE's identity.

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